

ABSTRACT

The invention relates to a measuring device (10) for determining the concentration of gases by infrared absorption, comprising a radiation source (2) which is arranged, together with a radiation detector (6) disposed in the radiation path, inside a housing (11) which is sealed in a gas-tight manner in relation to the gas which is to be measured. At least one infrared permeable window is arranged in the radiation path between the radiation source (2) and the radiation detector (6). Said window seals the inside of the housing in relation to the gas which is to be measured. The radiation path is divided into at least three sections (21, 22, 23). The first section (21) is arranged between the radiation source (2) and a first infrared permeable window (3); the second section (22) is embodied in the form of a measuring section which has access to the gas and extends from the first infrared permeable window (3) to a second infrared permeable window (4); the third section (23) is disposed between the second infrared permeable window (4) and the radiation detector (6). The radiation detector (6) contains two detectors. The first is mounted in the form of a measuring detector and the other as a reference detector. The housing (11) of the measuring device has a thermal deformation resistance of up to at least 100°C.